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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,716	12/21/2001	Takayuki Hatase	MAT-8213US	5800

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EXAMINER	
HERNANDEZ, NELSON D	

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/036,716	HATASE ET AL.	
	Examiner	Art Unit	
	Nelson D. Hernandez	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/29/02 & 1/24/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **1-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikurumi, US Patent 6,081,613 in view of Wilder, US Patent 5,262,871.

Regarding **claim 1**, Ikurumi discloses an image reading device (Fig. 1) for reading an optical image of an object using a camera having pixels arrayed in a line (Fig. 1: 3), comprising: a relative-moving mechanism (Fig. 1: 11) for moving the object relative to the camera; a relative-movement detector (encoder in fig. 1: 4) for detecting the object moving a given distance in one direction relative to the camera; and a timing signal generator unit (Fig. 1: 5) for generating an image pickup start timing signal which is fed to the line CCD camera based on a movement amount detection signal of pulses transmitted from the encoder (Col. 5, lines 7-54). Ikurumi does not explicitly disclose a pixel-selecting section for accessing the pixels individually and outputting an image signal; pixel-selecting-information-providing means for providing pixel-selecting information including necessary information to specify a pixel which outputs the image signal; and a controller for controlling said pixel-selecting section based on the pixel-selecting information and outputting a pixel signal supplied from a desirable pixel when said relative-movement detector detects a relative movement for the given distance.

However, Wilder teaches a multiple resolution image sensor (Fig. 2), wherein the readout of the image sensor may be controlled to permit the number of pixel signals read out at any one time to be varied, also teaches the use of decoders (Fig. 2: 12 and 14) to select individually the pixels in the image sensor to be read at any time (Col. 4, lines 45-66; col. 5, line 12 – col. 6, line 39).

Therefore, taking the combined teaching of Ikurumi in view of Wilder as a whole, it would have been obvious to on of ordinary skill in the art at the time the invention was made to modify Ikurumi by having a sensor with decoders to select individually the pixels in the image sensor to be read based on a movement amount detection signal of pulses transmitted from the relative movement mechanism. The motivation to do so would help the image reading device to increase the processing speed since ~~the~~ it will be reading only with a particular portion or a region of interest of the image sensor, minimizing the amount of data as suggested by Wilder (Col. 1, lines 32-61).

Regarding **claim 2**, Ikurumi discloses an image reading device comprising: a camera having pixels arrayed in a line in a first direction (Fig. 1: 3); a moving mechanism (Fig. 1: 11) for moving an object in a second direction crossing the first direction relative to said camera; a detector (encoder in fig. 1: 4) for detecting the object moving a given distance in the second direction relative to said camera and a timing signal generator unit (Fig. 1: 5) for generating an image pickup start timing signal which is fed to the line CCD camera based on a movement amount detection signal of pulses transmitted from the encoder (Col. 5, lines 7-54). Ikurumi does not explicitly disclose a pixel selector for accessing the pixels individually and outputting an image signal; an

information-providing section for providing necessary information to specify a pixel which outputs the image signal; and a controller for controlling said pixel selector based on the information and outputting a pixel signal supplied from a desirable pixel when said detector detects a relative movement for the given distance.

However, Wilder teaches a multiple resolution image sensor (Fig. 2), wherein the readout of the image sensor may be controlled to permit the number of pixel signals read out at any one time to be varied, also teaches the use of decoders (Fig. 2: 12 and 14) to select individually the pixels in the image sensor to be read at any time (Col. 4, lines 45-66; col. 5, line 12 – col. 6, line 39).

Therefore, taking the combined teaching of Ikurumi in view of Wilder as a whole, it would have been obvious to on of ordinary skill in the art at the time the invention was made to modify Ikurumi by having a sensor with decoders to select individually the pixels in the image sensor to be read based on a movement amount detection signal of pulses transmitted from the relative movement mechanism. The motivation to do so would help the image reading device to increase the processing speed since the it will be reading only with a particular portion or a region of interest of the image sensor, minimizing the amount of data as suggested by Wilder (Col. 1, lines 32-61).

Regarding **claim 3**, Ikurumi discloses a linear CCD camera but does not explicitly disclose said linear CCD camera having a photoelectric transfer element. However, Official Notice is taken that the use of photoelectric transfer elements on CCD sensors is notoriously well known in the art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the linear CCD with

photoelectric transfer elements with the motivation of reading out the signal charges out of the linear CCD camera.

Regarding **claim 4**, Ikurumi discloses an image reading method for reading an optical image of an object using a camera with pixels arrayed in a line (Fig. 1: 3), said method comprising the step of: moving the object by a relative-moving device in one direction relative to a camera (Fig. 1: 11; Col. 5, lines 7-20); also teaches a step of generating an image pickup start timing signal which is fed to the line CCD camera based on a movement amount detection signal of pulses transmitted from the encoder (Col. 5, lines 7-54). Ikurumi does not explicitly disclose outputting an image signal from a specific pixel repeatedly based on pixel-selecting information every time the object moves a given distance.

However, Wilder teaches a multiple resolution image sensor (Fig. 2), wherein the readout of the image sensor may be controlled to permit the number of pixel signals read out at any one time to be varied, also teaches the use of decoders (Fig. 2: 12 and 14) to select individually the pixels in the image sensor to be read at any time (Col. 4, lines 45-66; col. 5, line 12 – col. 6, line 39).

Therefore, taking the combined teaching of Ikurumi in view of Wilder as a whole, it would have been obvious to on of ordinary skill in the art at the time the invention was made to modify Ikurumi by having a sensor with decoders to select individually the pixels in the image sensor to be read based on a movement amount detection signal of pulses transmitted from the relative movement mechanism. The motivation to do so would help the image reading device to increase the processing speed since the it will

be reading only with a particular portion or a region of interest of the image sensor, minimizing the amount of data as suggested by Wilder (Col. 1, lines 32-61).

Regarding **claim 5**, Ikurumi discloses an image reading device (Fig. 1) for reading an optical image of an object for use with a camera having a plurality of pixels (Fig. 1: 3), comprising: a relative movement detector (encoder in fig. 1: 4) for detecting movement of said object, also teaches a relative-moving mechanism (Fig. 1: 11) for moving the object relative to the camera and a timing signal generator unit (Fig. 1: 5) for generating an image pickup start timing signal which is fed to the line CCD camera based on a movement amount detection signal of pulses transmitted from the encoder (Col. 5, lines 7-54). Ikurumi does not explicitly disclose a pixel-selecting-information-providing means for providing information to designate ones of said plurality of pixels to correspond to an output image signal to the exclusion of others of said plurality of pixels; a pixel-selecting section for transmitting said output image signal corresponding to said ones of said plurality of pixels; and said pixel-selecting section transmitting said output image signal upon said detector detecting movement of said object.

However, Wilder teaches a multiple resolution image sensor (Fig. 2), wherein the readout of the image sensor may be controlled to permit the number of pixel signals read out at any one time to be varied, also teaches the use of decoders (Fig. 2: 12 and 14) to select individually the pixels in the image sensor to be read at any time (Col. 4, lines 45-66; col. 5, line 12 – col. 6, line 39).

Therefore, taking the combined teaching of Ikurumi in view of Wilder as a whole, it would have been obvious to on of ordinary skill in the art at the time the invention was

made to modify Ikurumi by having a sensor with decoders to select individually the pixels in the image sensor to be read based on a movement amount detection signal of pulses transmitted from the relative movement mechanism. The motivation to do so would help the image reading device to increase the processing speed since the it will be reading only with a particular portion or a region of interest of the image sensor, minimizing the amount of data as suggested by Wilder (Col. 1, lines 32-61).

Regarding **claim 6**, the combination of Ikurumi in view of Wilder as a whole teaches the same as in claim 5. Therefore, grounds for rejecting claim 5 apply here.

Regarding **claim 7**, Ikurumi discloses a method for reading an optical image of an object using a camera (Fig. 1) having a plurality of pixels comprising the steps of detecting movement of said object (encoder in fig. 1: 4), also teaches a step of generating an image pickup start timing signal which is fed to the line CCD camera based on a movement amount detection signal of pulses transmitted from the encoder (Col. 5, lines 7-54). Ikurumi does not explicitly disclose designating ones of said plurality of pixels to correspond to an output image signal to the exclusion of others of said plurality of pixels; and transmitting said output image signal from said ones of said plurality of pixels upon said object moving.

However, Wilder teaches a multiple resolution image sensor (Fig. 2), wherein the readout of the image sensor may be controlled to permit the number of pixel signals read out at any one time to be varied, also teaches the use of decoders (Fig. 2: 12 and 14) to select individually the pixels in the image sensor to be read at any time (Col. 4, lines 45-66; col. 5, line 12 – col. 6, line 39).

Therefore, taking the combined teaching of Ikurumi in view of Wilder as a whole, it would have been obvious to on of ordinary skill in the art at the time the invention was made to modify Ikurumi by having a sensor with decoders to select individually the pixels in the image sensor to be read based on a movement amount detection signal of pulses transmitted from the relative movement mechanism. The motivation to do so would help the image reading device to increase the processing speed since the it will be reading only with a particular portion or a region of interest of the image sensor, minimizing the amount of data as suggested by Wilder (Col. 1, lines 32-61).

Regarding **claim 8**, the combination of Ikurumi in view of Wilder as a whole teaches the same as in claim 7. Therefore, grounds for rejecting claim 7 apply here.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernandez whose telephone number is (703) 305-8717. The examiner can normally be reached on 8:30 A.M. to 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R. Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nelson D. Hernandez
Examiner
Art Unit 2612

NDHH
February 3, 2005

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